



Department of Energy
Washington, DC 20585

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ENVIRONMENTAL LAW DEPT.

The Honorable Thomas Sharp
Town Supervisor
1375 Ridge Road
Lewiston, New York 14092

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Gregory
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Dear Mr. Sharp:

Secretary of Energy Hazel O'Leary has announced a new approach to openness in the Department of Energy (DOE) and its communications with the public. In support of this initiative, we are pleased to forward the enclosed information related to the former Niagara Smelting Co. site in your jurisdiction that performed work for DOE's predecessor agencies. This information is provided for your information, use, and retention.

DOE's Formerly Utilized Sites Remedial Action Program (FUSRAP) is responsible for identification of sites used by DOE's predecessor agencies, determining their current radiological condition and, where it has authority, performing remedial action to cleanup sites to meet current radiological protection requirements. A conservative set of technical evaluation guidelines is used in these investigations to assure protection of public health, safety and the environment. Where DOE does not have authority for proceeding, the available site information is forwarded to the appropriate Federal or State Agency.

DOE studied the historical records of the former Niagara Smelting Co. site, and it determined that the site was not involved in the handling of radioactive materials. Nonetheless, because this site had previously been identified for investigation, these records are being furnished to you.

If you have any questions, please feel free to call me at 301-427-1721 or Dr. W. Alexander Williams 301-427-1719 of my staff.

Sincerely,

James W. Wagoner II
Director
Off-Site/Savannah River Program Division
Office of Eastern Area Programs
Office of Environmental Restoration

Enclosures

cc:
Zeneca, Inc., Wilmington, DE
P. Merges, State of New York



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THIS DOCUMENT CONTAINS 2 PAGES

U.S. ENGINEER OFFICE
MADISON SQUARE AREA
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Col. Serial: 100B-M-99

File Index: 2.14

BY AUTHORITY OF J.R. Patton 7-9-82

March 24, 1944

BY M. Kahal DATE 4-16-85

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MEMORANDUM

Inspection Trip to Niagara Smelting Company, on
March 22, 1944

APR 1 1944

Present: Captains Hearon and Luke
Dr. Kilpatrick
Messrs. Finlay, Hazel and Brallier

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Discussed production of product 666 and learned that present production was 1250 pounds per week, the latest material being less than .2 per cent SiCl_4 . In order to obtain this material, a second distillation is required. Captain Hearon, Dr. Kilpatrick and Mr. Brallier discussed increasing the production beginning next week, to one ton per week and delivery by June 17 of a total of 15 tons of material. Captain Hearon promised to supply the necessary order.

We then discussed the impurities in one cylinder which contained a yellow-colored BCl_3 , and also discussed the analytical methods. Subsequently we visited the plant the noted some difficulties in the production. One difficulty seems to be that the product 666A, when reacting with chlorine gas, forms channels and it is necessary to open up the head of the reactor and break up the mass. The first condensate contains sulfur and is colored. After two distillations, the product is colorless and is normally low in SiCl_4 . Each second distillation is an independent distillation, the material remaining in the pot being returned to the system. Two sources of trouble were noted: (1) that in removing liquid from the cylinders, they often connect up just beyond the S-SCl treater and it is possible that sulfur might get into the tanks at this point. (2) the method of cleaning the cylinders also indicated that SCl might be introduced. This treatment consisted of the removal of the valve from the tank, the steaming out of the tank followed by a dry air treatment and an inspection of the cylinder by the use of an electric lamp. However, the same steam jets are used for cleaning out SCl_2 drums and it is possible that contamination is often introduced into the cylinders. A third source of possible contamination comes from the use of pipe dope when the valves are reattached to the cylinders.

Dr. Kilpatrick recommended that Norton segregate the cylinders used for recovery and make certain that all cylinders shipped back to Niagara Smelting were empty. He recommended to Niagara Smelting that if the cylinders were in good condition and had not contained poor product, precautions should be taken to keep the cylinders anhydrous and no cleaning process should be used. In other words, cylinders should be kept in continuous use without cleaning unless the product in a particular cylinder proved unsatisfactory. If this occurred, the cylinder should be thoroughly cleaned and dried before use.

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In connection with the analytical method, Dr. Kilpatrick made certain suggestions to Mr. Hazel and promised to look into possible determination of the vapor pressure of methyl silicate at CO₂ snow temperature and higher.

* * *

Dr. Kilpatrick asked Mr. Brallier where he had obtained the density data on product 666. He raised the question as to the purity of product 666 used in these determinations. Mr. Brallier said that these determinations had been made at another laboratory but he did not reveal the name of the laboratory. He indicated that he thought the material had been prepared by the reaction of BF₃ with AlCl₃. He promised to get further information on these determinations which are not in agreement with S.A.M.'s determinations, and to let Dr. Kilpatrick know.

Martin Kilpatrick

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Luke
Kilpatrick (2)

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